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ADDITIONAL AS-6 BASE STATION FACILITIES

ITEM 5 (100-)

Equipment of the AS-6 System is being designed and developed under Task Order 8. This development program was preceded by a study phase under Task Order 4, in which the principles of the AS-6 were established and evaluated. The evaluation included long-range transmission tests which yielded successful results.

The testing was conducted in such a manner that two modes of Field Unit operation could be compared: 1) Using only the predicted optimum frequency during any given hour; and 2) using three frequencies: the predicted, the next higher and the next lower. While generally good results were obtained using just one frequency, the usage of three resulted in perfect copy for every hour of the test, excluding operator and equipment failures. In view of the importance of the AS-6 mission, it appears judicious to provide for three-frequency operation.

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In addition it is proposed to provide a second Heiland Visicorder (only one is now required) for visual translation through recording waveforms of received data. Reliability will be greatly increased by this addition, as will station capability and operating convenience.

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The scope of Task Order 8 now covers only single-frequency operation

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and one visual recorder. As stated above, multiple receivers and recognizers must be provided for three-frequency coverage. The cost summary attached covers increased Task Order 8 scope for two (2) additional receivers and recognizers. A second visual translator will also be provided. Control circuits for optimum utilization of all this equipment will be included.

Design will be broad enough to permit reception of the RS-16A as well as the AS-6, and even future (unspecified) QFM systems requiring visual translation could be accommodated. These receiving equipments may be mixed (AS-6 plus RS-16A, etc.) but still all feed the same output recorders. There will be no practical limit on the number of receivers-recognizers that may energize the output devices, other than the traffic load. This criterion is nearly negligible with the very low duty-factor of the field equipments which are used with visual translation. The two recorders will provide coverage during paper replenishment or maintenance, increase reliability, and accommodate that extreme rarity: simultaneous transmission from two Field Units.

It is anticipated that the work herein proposed will constitute a supplement to Task Order 8. Present provisions for Reports, Drawings, and Delivery Schedule will not be affected by this proposed effort.

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DELIVERY SCHEDULE

- Item 1. Completed ten months after receipt of Task Order.
- Item 2. Completed ten months after receipt of Task Order.
- Item 3. Monthly - fifteen days after period being reported.
- Item 4. Two months after completion of Item 1.

- Item 5. This equipment will be incorporated into the AS-6 Base Station to be delivered under Task Order 8. Therefore, the delivery schedule for the AS-6 Base Station under Task Order 8 shall also apply to this Item. No extension in period of service is required.

- NOTE:
- (a) The delivery schedule for Items 1-4 is contingent upon 488 overtime hours being expended.
 - (b) The delivery schedule for Item 5 is contingent upon 440 overtime hours being expended.

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